



3-6 DISCOVER Geology

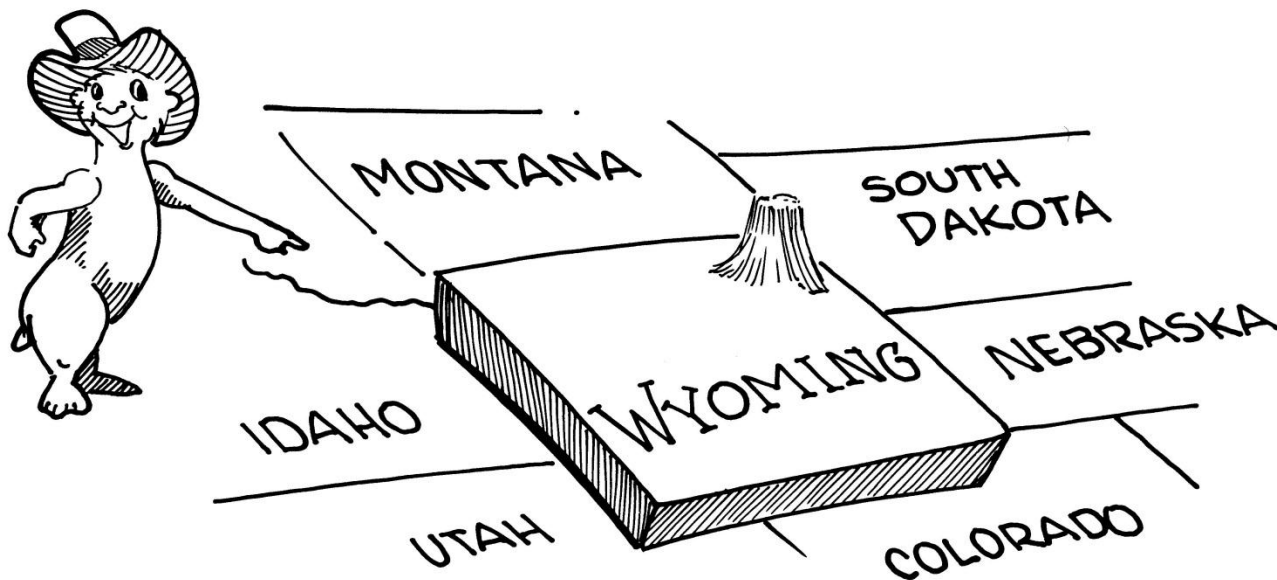
GEOLOGY



A long time ago northwestern Wyoming looked very different. The climate was warm and wet, much like the tropics today. Shallow seas covered much of the land. Mud and sand built up on the bottom of the seas. As time passed, the water drained away. The mud and sand were cemented together forming **sedimentary** rocks.

Great pressures deep within the earth caused **faults** (cracks). This pressure pushed the rocks up. They formed the Rocky Mountains and Black Hills. High temperatures melted rocks deep in the earth. Some of the melted rock (**magma**) forced its way up creating volcanoes. Some of the magma cooled and hardened underground forming **igneous rock**.

The igneous rock that makes Devils Tower is called **phonolite porphyry**. The word “phonolite” is like “phonograph” (record player). The rock got this name because it makes a ringing sound when hit with a hammer. Five small buttes are located about three miles northeast of Devils Tower. These are called the Missouri Buttes. They are also made of phonolite. These buttes may be connected underground with Devils Tower





Devils Tower is unique and mysterious. It has four, five, six, and seven sided columns. These columns formed as the magma cooled underground and hardened. As it cooled, the magma shrank in size and cracked. Because it didn't cool too fast or too slow, these cracks met to form columns.

Devils Tower was buried for millions of years. During that time, the weather and Belle Fourche River wore down the sedimentary rock. The softer sedimentary rocks were carried away, leaving the harder igneous rock. Slowly, Devils Tower began to show. The tower stood taller and taller as more rock was washed away.

